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TOWN OF BELMONT Checklist for Stormwater Management and Erosion Control Report

B. Report Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Report. The checklist is also intended to provide the reviewing authority with a summary of the components necessary for a comprehensive Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Management and Erosion Control Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan, the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date

Philane 7/29/2015



Checklist for Stormwater Management and Erosion Control Report

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?
☐ Redevelopment
☐ Mix of New Development and Redevelopment
LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:
☐ No disturbance to any Wetland Resource Areas
☐ Site Design Practices
Reduced Impervious Area (Redevelopment Only)
☐ Minimizing disturbance to existing trees and shrubs
☐ LID Site Design Credit Requested:
Credit 1
Credit 2
☐ Credit 3
Use of "country drainage" versus curb and gutter conveyance and pipe
Bioretention Cells (includes Rain Gardens)
Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
Treebox Filter
☐ Water Quality Swale
☐ Grass Channel
Green Roof
M Other (describe): Leaching Facilities
Standard 1: No New Untreated Discharges
☑ No new untreated discharges
Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth



 Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.
Standard 2: Peak Rate Attenuation
Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
☑ Calculations provided to show that post-development peak discharge rates do not exceed pre- development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24- hour storm.
Any potential change to the existing conditions of abutting properties from any increase in volume of stormwater runoff have been identified in the Report
The Report provides calculations demonstrating that the post-development discharge volume is equal to or less than the pre-development discharge volume from the 2-year and the 10-year 24-hour storms.
The Report provides a quantitative impact of discharge volumes from the 100-year 24-hour storm. If this evaluation shows that increased off-site flooding result from the discharge volumes from the 100-year 24-hour storms, BMPs also are described in the Report that the applicant will implement and maintained to attenuate these discharges.
Any potential change to the existing conditions of abutting properties from erosion, silting, flooding, or sedimentation have been identified in the Report.
The Report describes the practices and controls that the Applicant will implement and maintain to prevent adverse impacts from erosion, silting, flooding, or sedimentation.
Any potential impacts to wetlands have been identified in the Report.
The Report describes the practices and controls that the Applicant will implement and maintain to prevent adverse impacts to wetlands.
Additional Requirements for Projects other than One and Two Family Developments:
Any potential impacts to ground water levels or wells have been identified in the Report, including quantitative projections of changes in the seasonal high water table and quantitative projections of storm-related short-term mounding calculations associated with infiltration BMPs for a 24-hour 10 year design storm.
The Report describes the practices and controls that the Applicant will Implement and maintain (if required) to prevent adverse impacts to ground water levels or wells for a 24-hour 10 year design storm.
Requirements Specific to Section 34.6.4.1(d)
Is stormwater from the pre-development site discharged directly to (check all that apply):



A surface water body (specify the water body)
The Belmont MS4 (storm sewers)
☐ Another MS4 (specify the MS4)
Other (specify)
☑ Will stormwater from the post-development site be discharges directly to (check all that apply):
A surface water body (specify the water body)
The Belmont MS4 (storm sewers) only the grass / worded area runoff
☐ Another MS4 (specify the MS4)
Other (specify)
Any potential impacts upon streams, wetlands and/or storm sewers have been identified in the Report. (Explain in Report narrative)
These will be prevented with mitigating measures that the Applicant will implement and maintain (explain in Report narrative)
These will be prevented without mitigating measures (explain in Report narrative)
The Report describes the practices and controls that the Applicant will implement and maintain to prevent any adverse impacts to streams, wetlands and/or storm sewers.
Additional Requirements for Projects other than One and Two Family Developments:
If the discharge is to an MS4, a certification that the discharge meets Massachusetts Surface Water Quality Standards and any applicable approved Total Maximum Daily Load (TMDL) waste load allocation is included in the Report.
Standard 3: Recharge
Soil Analysis provided.
Required Recharge Volume calculation provided.
Required Recharge volume reduced through use of the LID site Design Credits.
회 Sizing the Infiltration, BMPs is based on the following method: Check the method used.
☑ Static ☐ Simple Dynamic ☐ Dynamic Field¹
Runoff from all impervious areas at the site discharging to the infiltration BMP.
Runoff from all Impervious areas at the site is <i>not</i> discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the Infiltration BMPs is sufficient to generate the required recharge volume.
Recharge BMPs have been sized to infiltrate the Required Recharge Volume.



Recharge BMPs have been sized to infiltrate the Required Recharge Volume only to the maximum extent practicable for the following reason:
Site is comprised solely of C and D soils and/or bedrock at the land surface
M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
Solid Waste Landfill pursuant to 310 CMR 19.000
Project is otherwise subject to Stormwater Management Standards only to the maximum exten practicable.
Calculations showing that the Infiltration BMPs will drain in 72 hours are provided.
Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.
^t 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Fleid method is used.
 The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided. Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland
Standard 4: Water Quality
The Long-Term Pollution Prevention Plan typically includes the following: Good housekeeping practices; Provisions for storing materials and waste products inside or under cover; Vehicle washing controls; Requirements for routine inspections and maintenance of stormwater BMPs; Spill prevention and response plans; Provisions for maintenance of lawns, gardens, and other landscaped areas; Requirements for storage and use of fertilizers, herbicides, and pesticides; Pet waste management provisions; Provisions for operation and management of septic systems; Provisions for solid waste management; Snow disposal and plowing plans relative to Wetland Resource Areas; Winter Road Salt and/or Sand Use and Storage restrictions; Street sweeping schedules; Provisions for prevention of illicit discharges to the stormwater management system; Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL; Training for staff or personnel Involved with implementing Long-Term Pollution Prevention Plan; List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
☑ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
is within the Zone II or Interim Wellhead Protection Area
☐ Is near or to other critical areas
is within soils with a rapid infiltration rate (greater than 2.4 Inches per hour)



involves runoff from land uses with higher potential pollutant loads.
☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 □ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided. □ The BMP is sized (and calculations provided) based on: □ The ½" or 1" Water Quality Volume or
The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checkilst found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.
Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)
 The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report. The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted price to the discharge of stormwater to the post-construction stormwater BMPs.
☐ The NPDES Multi-Sector General Permit does <i>not</i> cover the land use.
LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
All exposure has been eliminated.
All exposure has not been eliminated and all BMPs selected are on MassDEP LUHPPL list.
The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.
Standard 6: Critical Areas
The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
Critical areas and BMPs are identified in the Stormwater Report.
Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable
Practicable as a:
Limited Project



	Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
	Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
	Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
	☐ Bike Path and/or Foot Path
	Redevelopment Project
	Redevelopment portion of mix of new and redevelopment.
	Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
	The project Involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.
Star	ndard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control
A Co ollo	onstruction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the owing information:
	Construction Sequencing Plan; Sequencing of Erosion and Sedimentation Controls;
A e pi	Adverse impacts due to erosion, sedimentation, or both during disturbance and construction activities revented:
	With erosion and sediment controls that the Applicant will implemented and maintain (explain in Report narrative)
	☐ Without erosion and sediment controls (explain in Report narrative)



	il	A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.	
		The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has <i>not</i> been included in the Stormwater Report but will be submitted <i>before</i> land disturbance begins.	
		The project is not covered by a NPDES Construction General Permit.	
	_ ·	The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report. The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.	
S		edard 9: Operation and Maintenance Plan	
	1 -	The Post Construction Operation and Maintenance Plan is Included in the Stormwater Report and notudes the following information:	
		Name of the stormwater management system owners;	
		Party responsible for operation and maintenance; Owner of the property	
		Schedule for Implementation of routine and non-routine maintenance tasks;	
		Plan showing the location of all stormwater BMPs maintenance access areas;	
		Description and delineation of public safety features;	
		Estimated operation and maintenance budget; and	
		Operation and Maintenance Log Form.	
	Th Re	ne responsible party is <i>not</i> the owner of the parcel where the BMP is located and the Stormwater eport includes the following submissions:	
		A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;	
		A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.	
ta	tandard 10: Prohibition of Illicit Discharges		
	Th	e Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;	
/		Illicit Discharge Compliance Statement is attached;	
]	NO any	Illicit Discharge Compliance Statement is attached but will be submitted <i>prior to</i> the discharge of a stormwater to post-construction BMPs.	

OPERATION AND MAINTENANCE PLAN

The purpose of this operation and maintenance plan is to prevent erosion, sedimentation, pollution or other deterioration of the area adjacent to Lot B-2, Waverley Terrace, Belmont, MA. To that end, the project proponent will perform the following activities and inspection on a continuing annual basis.

INITIAL INSPECTIONS AND MONITORING

ITEM

Monitor sediment pit, leaching pits and any other drainage structure for proper functioning and record observations.

FREQUENCY

Beginning when each structure is opened for stormwater receipt and at least once a year.

INITIAL INSPECTIONS AND MONITORING

A. Sweeping of paved areas.

Just after the snow melts in early spring,

before the sand enters the sediment pit

and when necessary.

A. Monitor leaching pits for effectiveness

and clean up if necessary.

Once per year.

B. Inspect and clean sediment pit. Dispose of sediments, oil and grease in accordance

with applicable law.

Once per year.

C. Inspect and repair landscape areas to

provide stabilized soils.

Spring and Fall.

- D. Maintenance of sediment pit shall conform to the guidelines of the Stormwater Management Volume II of the State Department of Environmental Protection.
- E. Observe the following practices:

During construction, straw wattles shall be used to prevent soil from being washed to the street and neighboring land.

